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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/523,812

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Stefan Schwarz

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EXAMINER

MEHTA, MEGHA S

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,812	<b>Applicant(s)</b> SCHWARZ, STEFAN	
	<b>Examiner</b> MEGHA MEHTA	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-30 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-19 and 24-30 is/are rejected.
- 7) ☒ Claim(s) 20-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/7/2005</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) was submitted on 2/7/2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the IDS is being considered by the examiner. Please refer to the applicant's copy of the 1449 submitted herewith.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 claims "an initially closed tubular member" in the preamble. This is indefinite because one would not know if "closed" is referring to the end of the tube, meaning that the end is capped off, or if it is referring to a sheet of metal, rolled and seamed to form a tube. Throughout the following office action, the Examiner is interpreting "closed" to mean the latter of the two.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1793

5. Claims 12, 13, 24-27 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 2 330 104 Amborn et al.

Regarding independent claim 12, the GB '104 patent teaches a method for joining tubes by using a high pressure fluid to form an indentation on the walls of the tubes, and using this high pressure fluid to additionally widen the walls resulting in a non-circular cross section on page 2, lines 12-19, page 4, lines 9-11 and figure 1.

Claim 13 requires positioning the component on the tubular member before joining. GB '104 teaches this on page 5, lines 4-7.

Claim 24 requires forcing the tube and component against a bead in the forming tool. GB '104 teaches forcing the tube and the component outwards to take the shape of the die on page 5, lines 7-14.

Regarding claims 25 and 26, GB '104 teaches using a mechanical punch to narrow the cross section of the tube and component before using high pressure fluid to conform the tube to the tool on page 6, lines 3-6.

Regarding claim 27, GB '104 teaches expanding the walls of the tube and component against a punch used to make indentations in the walls on page 2, lines 12-19 and page 6, lines 3-6.

Claim 30 requires a damping material between the tube and the component. GB '104 teaches placing a metal foil between the tubes on page 4, lines 24-28.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1793

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2 330 104 Amborn et al in view of GB 2 330 096 Amborn et al.

Regarding claim 14, the GB '096 patent teaches an open tubular component where the edges are turned up and then sprung back after positioning with the tube on page 8, lines 29 to page 9, line 6.

It would have been obvious to combine GB '104 with GB '096 because they are both teaching methods of joining tubes together. It would have been obvious to include the turning up and springing back of the edges of the component from GB '096 into the method of GB '104 to ensure a tighter and more secure fit of the component to the tube.

Claim 15 requires forcing the tube and component against a bead in the forming tool. GB '104 teaches forcing the tube and the component outwards to take the shape of the die on page 5, lines 7-14.

Regarding claims 16 and 17, GB '104 teaches using a mechanical punch to narrow the cross section of the tube and component before using high pressure fluid to conform the tube to the tool on page 6, lines 3-6.

Regarding claim 18, GB '104 teaches expanding the walls of the tube and component against a punch used to make indentations in the walls on page 2, lines 12-19 and page 6, lines 3-6.

Regarding claim 19, GB '104 teaches forming ribs around the circumference of the tube-component joint on page 4, lines 9-11.

Art Unit: 1793

8. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2 330 104 Amborn et al as applied to claim 12 above, and further in view of US 2,504,625 Barnhart et al and US 3,124,874 Woolley.

Amborn teaches the method of joining tubes. Amborn does not teach using solder or another adhesive to reinforce the joint. Barnhart teaches making an indentation in the tubes and then adding solder and melting it to activate the adhesive properties in column 2, lines 30-33 and column 3, lines 11-19.

Barnhart, however, does not teach applying the adhesive before making the indentations. Woolley teaches applying an epoxy adhesive to the tubes before inserting one inside the other and then punching the tubes in column 1 line 68- column 2 line 24.

It would have been obvious to combine Barnhart and Woolley with Amborn because they all teach methods of connecting pipes. It would have been obvious to include the adhesion methods of Barnhart and Woolley because of the reinforced joint, as explained by Woolley in column 1, line 71 – column 2, line 3.

***Allowable Subject Matter***

9. Claims 20-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 20-23 would be allowable in independent form because the prior art of record does not teach or suggest expanding the tube or component into the branch such that the undercut surfaces of the narrowing are also expanded. Neither Amborn document, GB '104 nor GB '096 discuss the undercut surfaces or if they are expanded during the method of joining.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEGHA MEHTA whose telephone number is (571)270-3598. The examiner can normally be reached on Monday to Friday 7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Megha Mehta/  
Examiner, Art Unit 1793

/Jerry A Lorengo/  
Supervisory Patent Examiner, Art Unit  
1793